ABSTRACT OF THE INVENTION

An austenitic stainless steel which comprises, on the percent by mass basis, C: 0.03 - 0.12 %, Si: 0.2 - 2 %, Mn: 0.1 - 3 %, P: 0.03 % or less, S: 0.01 % or less, Ni: more than 18 % and less than 25 %, Cr: more than 22 % and less than 30 %, Co: 0.04 - 0.8 %, Ti: 0.002 % or more and less than 0.01 %, Nb: 0.1 - 1 %, V: 0.01 - 1 %, B: more than 0.0005 % and 0.2 % or less, sol. Al: 0.0005 % or more and less than 0.03 %, N: 0.1 - 0.35 % and O (Oxygen): 0.001 - 0.008 %, with the balance being Fe and impurities can be utilized as materials such as steel tubes used as a superheater tube, reheater tube for a boiler and a furnace tube for the chemical industry, and a steel plate, a steel bar and a steel forging and the like, which are used as a heat resistant, pressure-tight member, whereby extremely large effects on the promotion of increasing high temperature and high pressure steam in a boiler for an electric power-generation can be obtained. Further, the austenitic stainless steel may contain a specified amount of one or more element(s) of Mo and W, and/or a specified amount of one or more element(s) of Mg, Zr, Ca, REM, Pd and Hf.